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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,151	03/05/2001	Hiroyuki Suzuki	FUJX 18.406	4535
26304	7590	03/16/2005	EXAMINER	
KATTEN MUCHIN ZAVIS ROSENMAN			NGUYEN, BRIAN D	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	

2661

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,151

Applicant(s)

SUZUKI, HIROYUKI

Examiner

Brian D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the application filed on 3/5/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,8,10,11,13 and 29 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,14-22,24,25,27,28,30 and 31 is/are rejected.
- 7) ☒ Claim(s) 12,23 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 6-7, 12, 14-28, 30, and 31 are objected to because of the following informalities:

Claim 6, lines 2 and 7, it is suggested to change "plurality of interfacing section" to --plurality of interfacing sections--.

Claim 14, lines 2, 7, and 9, it is suggested change "plurality of interfacing section" to --plurality of interfacing sections--.

Claim 16, lines 2 and 12, it is suggested change "plurality of interfacing section" to --plurality of interfacing sections--.

Claim 17, line 2, "a form of a failure" seems to refer back to "a form of the failure" in line 8 of claim 16. If this is true, it is suggested to change "a form of a failure" to --the form of the failure--. In line 5, "interfacing section" should be changed to --interfacing sections--.

Claim 22, line 2, "an alarm packet" seems to refer back to "an alarm packet" in line 7 of claim 6. If this is true, it is suggested to change "an alarm packet" to --the alarm packet--.

Claim 23, line 2, "an alarm packet" seems to refer back to "an alarm packet" in line 15 of claim 8. If this is true, it is suggested to change "an alarm packet" to --the alarm packet--.

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Claim 24, line 2, “an alarm packet” seems to refer back to “an alarm packet” in line 7 of claim 14. If this is true, it is suggested to change “an alarm packet” to --the alarm packet--. In line 4, it is suggested to insert --of-- before “said transmission paths”.

Claim 25, line 2, “an alarm packet” seems to refer back to “an alarm packet” in line 16 of claim 16. If this is true, it is suggested to change “an alarm packet” to --the alarm packet--.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9, 14-21, 24-27, 30, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 19, line 2, “identifiers of a path” is unclear if each path can include a plurality of identifiers.

Claim 14 is unclear because in line 4, failure detecting section detects a failure of the interfacing section while in line 8, a failure is detected by the failure detecting section and interfacing section.

Claim 16, line 7, “a combination of either or both...” is unclear. It is suggested to delete “a combination of”. See page 26, line 24-page 25, line 4 of the specification.

Claim 20 recites the limitation "said combination of said interfacing section" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semaan (6,850,483).

Regarding claims 1 and 4, Semaan discloses a line restoring method comprising the steps of: monitoring each occurrence of a failure preventing transmission to each of succeeding transmission sections of a plurality of redundantly configured transmission paths (11, 12); relaying a packet as a connectionless service from a preceding transmission section of a specific transmission path, of the plurality of transmission paths, to its succeeding transmission section while a failure in the specific transmission path continues to exist by using one of the plurality of transmission paths other than the specific transmission path (see figure 1 and col. 2, lines 26-55). Semaan does not specifically disclose recognizing an attribute of a packet and relaying the packet when the recognized attribute indicates that the packet is a subject of a best effort service. However, different packets have different priorities and best effort service is a lowest priority are well known in the art. Because different packets have different priority levels, a switch or a router must be able to recognize the attribute of a packet to route the packet through the network based on the service contract. When a failure is detected, all the packets will be rerouted and how the packets are rerouted is based on their priorities.

Regarding claims 2 and 5, Semaan discloses a line restoring method comprising the steps of: forming in advance active paths and reserve paths capable of substituting the active paths in each of a plurality of redundantly configured transmission paths; monitoring each occurrence of a failure preventing transmission to a succeeding transmission section of the active paths; relaying a packet from a preceding transmission section of a specific active path, of the active paths, to its succeeding transmission section while a failure in the specific active path continues to exist by using one of the reserve paths capable of substituting the specific active path (see figure 1 and col. 2, lines 26-55). Semaan does not specifically disclose recognizing an attribute of a packet and relaying the packet when the recognized attribute indicates that the packet is a subject of either a control-loaded service or a guaranteed service. However, different packets have different priorities and a guaranteed service has a higher priority than a best effort service are well known in the art. Because different packets have different priority levels, a switch or a router must be able to recognize the attribute of a packet to route the packet through the network based on the service contract. When a failure is detected, all the packets will be rerouted and how the packets are rerouted is based on their priorities.

7. Claims 6-7, 14-15, 22, 24, , 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semaan (6,850,483) in view of Shew et al (6,530,032).

Regarding claim 6, Semaan discloses a packet transmission equipment comprising: a plurality of interfacing section for interfacing the packet transmission equipment with each of redundantly configured simplex transmission paths in a physical layer; failure detecting section for detecting in the physical layer, a failure in each of preceding transmission sections of the transmission paths; and communication controlling section for terminating the transmission paths

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via the plurality of interfacing section and transmitting an alarm packet (the protection frame) indicating a failure detected by the failure detecting section to all or part of succeeding transmission sections of the transmission paths (see figure 1; col. 1, lines 42-63; col. 2, lines 26-55). Semaan does not specifically disclose the network is a label-switching network. However, detecting fault in a label switching network is well known in the art. Shew discloses detecting fault in a label-switching network (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply fault detection to a label switching network as taught by Shew in the system of Semaan in order to detect faults in label switching network.

Regarding claim 7, Semaan discloses identifier of a transmission path where a failure has been detected (see location of failure in the abstract).

Regarding claim 22, Semaan discloses the communication controlling section relays an alarm packet received from preceding transmission sections of the transmission paths, to all or part of succeeding transmission sections of the transmission paths (see the protection frame is transmitted to other nodes in the abstract).

Regarding claim 28, Semaan implicitly discloses transmitter subbuffering section for accumulating a packet transmitted to a succeeding transmission section of the transmission paths, and wherein the communication controlling section when receiving the alarm packet, transmits with priority a packet accumulated in the transmitter subbuffering section and including a sender and a number same as those included in the alarm packet (note that each switch includes buffers for storing received data packets and forwarding the data packets to the next node in the network).

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An alarm packet should be assigned a high priority because it is important for other nodes to know the location of the fault in the network).

Regarding claims 14, 15, 24, and 30, claims 14, 15, 24, and 30 have substantially the same limitations as claims 6, 7, 22, and 28. Therefore, they are subject to the same rejection. Note that Semaan teaches both the location of the failure and the type of the failure.

Allowable Subject Matter

8. Claims 3, 8, 10, 11, 13, and 29 are allowed.
9. Claims 9, 12, 16-21, 23, 25-27, and 31 would be allowable if rewritten or amended to overcome the objection(s) and/or rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Afferton et al (6,452,906), Ouchi (6,240,064), and Elahmadi et al (6,483,803).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



3/9/05

BRIAN NGUYEN
PRIMARY EXAMINER